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ABSTRACT

An examination of the innovative compensation systems called gainsharing, profit-sharing, pay-for-knowledge, two-tier wage plans, and lump sum bonuses has the following public policy implications: (1) more research is needed to evaluate the private and public sectors' experience with those alternative systems; (2) gainsharing and profit-sharing bonuses should not be given tax advantages because that would actually undermine those compensation plans; (3) the Department of Labor should reexamine the Fair Labor Standards Act to make it less difficult for employers to provide equal-percent gain- and profit-sharing bonuses in order to foster an atmosphere of teamwork while still complying with the act; (4) federal and state mediators should be trained to discuss the innovative systems during collective bargaining; (5) the money available to support area-wide labor-management committees such as the Buffalo-Erie County Labor-Management Council should be enhanced so that they can provide a delivery system for information dissemination; and (6) the government and employers should recognize that, regardless of the competition that has required employers to be cost-conscious when approaching wage decisions, there is nothing particularly innovative about reducing employees' wages and, in turn, their standard of living. (60 references) (CML)

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33. INNOVATIVE COMPENSATION SYSTEMS: IMPLICATIONS FOR EMPLOYERS, UNIONS, AND GOVERNMENT

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33. INNOVATIVE COMPENSATION SYSTEMS: IMPLICATIONS FOR EMPLOYERS, UNIONS, AND GOVERNMENT

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Introduction

In recent years, the necessity for organizations to control labor costs, while at the same time increasing productivity, enhancing quality and customer service, has never been more urgent. This has caused a significant increase in the use of alternative methods of compensation including gainsharing and profit-sharing plans, along with newer concepts in compensation administration and design such as pay-for-knowledge, two-tier plans, and lump sum bonuses in lieu of, or in combination with, fixed periodic general pay increases.

The use of alternative compensation schemes is coming at a time when traditional or conventional approaches and techniques are being sharply curtailed. The American Productivity Center (APC) (O'Dell, 1987) reports that the use of across the board pay adjustments were eliminated or significantly reduced by 36.1 percent its sample of firms. See Note 1 for the specification of the survey data. Cost of living adjustments (COLA'S) and merit increases were eliminated or significantly reduced by 27.6 percent and 25.2 percent, respectively. Clearly, the approaches taken to employee compensation in U.S. firms constitutes a radical shift in directions, heretofore unknown. As will be suggested by the analysis below, many of the new forms of

compensation are being implemented with only the most limited research or practical data to support them.

Gainsharing/profit-sharing plans are organizational systems for sharing the economic benefits of improved productivity, quality, cost reductions, and overall business performance in the form of regular cash bonuses. Many gainsharing and profit-sharing plans incorporate existing, or develop enhanced, systems of employee involvement. Pay-for-knowledge plans compensate employees based on increasing levels of skill and knowledge, rather than by level, position, or job tenure. Two-tier compensation systems pay newly hired employees at a rate that is lower than incumbent employees. This has the effect of reducing the average wage/salary for the entire employee complement. In a similar fashion, lump sum mechanisms involve one-time cash payments most often in lieu of fixed increases, thus freezing base pay for the period in which the lump sums are employed.

These five forms of alternative pay arrangements are reviewed in this paper. Each section begins with an operating definition of the pay form and the underlying theoretical support or drivers. Also included for each pay form was available data on its use and research data on its impact. The paper concludes with a discussion of the public policy implications.

GAINSHARING AND PROFIT-SHARING

The gainsharing and profit-sharing concept is not new. Several firms initiated profit-sharing plans in the first half of the nineteenth century. The Scanlon Plan began in the 1930's. Rucker Plans first

appeared in the 1940's. Although they began as attempts to save companies from financial disaster, by the 1950's many plans reflected a broad philosophy and a changed relationship between unions and management. Although first considered applicable only to the private sector, particularly in traditional heavy manufacturing, gainsharing and profit-sharing plans may now be found in the other areas of manufacturing and in the non-for-profit (such as health care) and government sectors.

Gainsharing and profit-sharing plans offer new strategies toward employee compensation, new management practices, new methods of providing employees with economic education as to the shifting competitive environment, and additional opportunities for cooperation between employers and unions. From an employer perspective, gain/profit-sharing plans offer an opportunity to enhance the performance of the organization and improve employee loyalty and commitment. From an employee perspective, these plans offer an additional earnings opportunity, information sharing and involvement in decision-making, as well as a demonstrated equitable sharing of performance improvements.

Gainsharing and profit-sharing are examined in this paper as unique concepts although profit-sharing could be considered one measure of gainsharing. This is due to several reasons, summarized more fully in the section titled, Differences Between Profit-Sharing and Gainsharing. First, profit-sharing tends to operate in two distinct fashions - deferred and cash distribution. Deferred distribution plans do not pay current bonuses to employees, but rather defer the profit-sharing monies

owed to employees generally for the purposes of providing funding for a pension or additional funding for a supplemental retirement vehicle. Cash distribution profit-sharing plans pay bonuses in the period in which they are earned. As a result, cash distribution pro sharing plans share some of the same motivational potential as gainsharing plans. Some profit-sharing plans are based on division, plant or business unit profitability, rather than corporate results. This form of profit-sharing is also closely allied to gainsharing. Further complicating the profit-sharing concept is that some plans are mixed in that a portion of monies earned are distributed to employees in the current period, while a portion is deferred.

Second, academic research has tended to arbitrarily separate profit-sharing and gainsharing in the study of reward systems, with profit-sharing more likely to be investigated by economists and gainsharing more likely the province of behavioral scientists. Third, some companies have policies prohibiting the use of profit-sharing while permitting gainsharing plans. Fourth, some unions prefer gainsharing plans rather than profit-sharing as a form of reward systems, as workers have more control over the elements contained in a gainsharing plan. Fifth, many facilities and plants are financially structured as cost centers as opposed to profit-centers, and therefore, the profit-sharing concept is not appropriate.

McKersie (1986) has pointed out an important theoretical and practical distinction between gainsharing and profit-sharing. McKersie views gainsharing plans as motivational in nature, that is, to enhance the performance of a specific work unit through enhanced employee

motivation and performance. In contrast, profit-sharing plans are designed to provide greater organizational equity by "sharing the fruits" (p. 7) of the organization's performance. Hence, gainsharing may be viewed as a "plant" program whereas profit-sharing is an organization wide effort.

In assembling this report, a major disclaimer must be offered. As Ehrenberg and Milkovich points out, much of the gainsharing research is "testimonial and anecdotal" (Ehrenberg & Milkovich, 1987). White (1979) has noted that past studies of gainsharing plans have suffered from an absence of empirical data and weak research designs. This has been due to: (1) the difficulty and expense of conducting research with organizations as a unit of analysis; (2) the inability to use sophisticated statistical techniques because each organization constitutes a single unit of analysis; (3) the inability to maintain strict research designs; and (4) the failure of academic evaluation to reward this type of work. Hamner (1988) has shared some of the same reservations, while Florkowski and Schuster (1989) have expressed similar concerns about the state of profit-sharing research.

GAINSHARING

Definition and Theory

Gainsharing plans formerly known as productivity sharing plans are organizational systems for sharing the benefits of improved productivity, cost reductions, quality, and/or overall business performance in the form of regular cash bonuses (Schuster, 1987). Gainsharing plans normally supplement rather than replace, existing

compensation systems. In many cases, gainsharing plans also include provisions for employee involvement or seek to stimulate further involvement in those locations that already have it. Gainsharing plans may include as participants all employees in the organization or a segment of them. For example, Scanlon Plans include all employees (hourly and salaried), while Improshare plans more typically include only hourly employees.

Several theories have been offered to explain gainsharing success. Some of these theories have focused solely on Scanlon Plan success, while others have looked more broadly at gainsharing generally. Frost, Wakely, and Ruh (1974) on Scanlon Plan success, point to the value of participation through high levels of employee involvement and reinforced by the payment of a bonus (equity sharing).

A more broad based organizational view of Scanlon Plan success is taken by Cummings and Molloy (1977). They point to the effects of participation (skill utilization, higher level needs fulfilled, greater employee control) and rewards (enhancing effort-reward contingencies and labor management cooperation). In addition, they also focus on enhanced labor-management trust and communication as key factors.

Again of Scanlon Plan success, Goodman & Moore (1976) utilize expectancy theory to tie worker beliefs about participation (effort) and performance contingencies.

In looking at gainsharing more broadly, Geare (1976) asserted a compensation oriented approach more reflective of traditional piece work schemes. Workers motivation is increased because they are paid for productivity gains. Bullock and Lawler (1984), in summarizing 30 case

studies, point to three sets of factors that may be related to plan success. They included structural factors (involvement structures, measures, amount distributed to employees, payout period), implementation factors (employee involvement, use of consultants, objective setting), and situational variables (union/nonunion, technology, size, management style, business climate).

Schuster (1986) suggests enhanced employee commitment, that is identification with the firms goals and objectives and greater effort on behalf of the organization, resulting from involvement and financial sharing, as well as communication, labor-management trust and implementation. Greater identification and effort is suggested to create productivity gains which are then shared. Finally, Hamner (1988) suggests that gainsharing is driven by a shift in the "wage/effort" bargain. That is, employees contribute to productivity gains through ideas, participation, and effort, and are rewarded for them. Hamner states, "the incentive of economic gain should act to release the extra effort necessary to generate it and create sufficient surplus value for employees and employers to share" (p. 333).

Use of Gainsharing

As noted above, there has been a significant increase in the use of gainsharing plans. Recent survey data from the American Productivity Center (O'Dell, 1987) show that 73 percent of all gainsharing plans were begun since 1980 and are in goods producing as opposed to service industries. The same survey showed that 211 of 1598 responding firms (13 percent) had a gainsharing plan. Although gainsharing plans

predominantly occur in the traditional manufacturing sector, gainsharing has spread to less heavy manufacturing, petro-chemicals, and into the service and not-for-profit sector, and government sector. A recent example is the use of productivity gainsharing for civilian employees of the United States Army (Miller & Schuster, 1986).

There are several major forms of gainsharing in the United States. These include: Scanlon, Rucker, and Improshare Plans, productivity and waste bonus and other plans which are either modifications of the named plans (for example, Scanlon multi-cost) or custom/locally developed plans.

There are seven major reasons for employers to install gainsharing/profit-sharing plans. These include the following:

(1) Philosophy of Management:

Gain/profit sharing reflects a broad philosophy of management. It is used to increase employee identification with, and commitment to, the organization by providing opportunities to participate in decision making (in some firms especially Scanlon firms) and to share financial gains. The British refer to this as financial participation. One union leader has recently stated that workers had the right to share profits (Majerus, 1984).

(2) A Management Tool to Increase the Performance of Hourly Workers:

Gainsharing plans are used in the same manner in which individual incentives are used. These plans are often shorter term in commitment, do not permit participation by salaried employees, are unlikely to have employee involvement and use very classical measures of performance.

(3) An Opportunity to Leverage White Collar Performance:

These firms have a need to manage and motivate salaried employees. The bonus reward system is designed to provide an incentive to salaried employees to induce better performance.

(4) A Method of Relating Compensation to Organizational Performance:

Some firms use gain/profit sharing as a way to relate employee compensation to the performance of the organization. Annual increases in compensation would be closely monitored, but employees would receive sizable bonuses in years when business conditions were good, and little or no bonus when the performance of the business did not warrant it. This approach is receiving increased attention from economists, who argue that it would help firms to be more competitive by making labor costs more sensitive to economic cycles, thus reducing inflation, and would reduce unemployment during recessionary periods by lowering the cost savings from layoffs (Mitchell, 1982). Weitzman (1985) has put the issue succinctly.

> "Our macroeconomic problems trace back, ultimately, to the wage system of paying labor. We try to award every employed worker a predetermined piece of the income pie before it is out of the oven, before the size of the pie is even known. Our 'social contract' promises workers a fixed wage independent of the health of their company, while the company chooses the employment level. That stabilizes the money income of whomever is hired, but only at the considerable cost of loading unemployment on low-seniority workers and inflation on everybody - a socially inferior risk-sharing arrangement that both diminishes and makes more variable the real income of the working class as a whole."

(5) A Vehicle for Change and Development:

These firms have found that financial rewards can be effectively employed to change longstanding attitudes and behavior, thus revitalizing more mature facilities. Sharing in these environments along with other strategies can result in dramatic improvements in labor relations.

(6) A Replacement or Alternative for Individual Incentives:

A significant number of firms are eliminating piece work incentives because of their costs, negative impact on employee relations, and lack of consequence with new systems of manufacturing. This issue is discussed further below.

(7) A Mechanism for Recapturing Pay Concessions/Smoothing Pay Containment:

A number of companies and unions agreed to institute gainsharing plans to offset concessionary reductions in wages and benefits. Higher productivity, cost reductions, and improved quality were used to generate bonuses to compensation employees for reduced wages. The same strategy was used in pay containment situations, often with lump sum increases combined with gainsharing. Lump sums are discussed in the section of this paper devoted to that topic.

The Special Role of the Scanlon Plan

The Scanlon Plan has been on the American industrial relations scene for nearly fifty years. Developed by a former United Steelworkers local president, the Scanlon Plan enjoys wider acceptance among unions.

Initially begun to help floundering companies avoid financial distress, the Scanlon Plan has enjoyed continued recent use in successful companies.

A typical Scanlon Plan contains the following elements: (1) all employees participate in the plan; (2) high levels of employee involvement through the use of Production Committees and other devices; (3) a financially based bonus formula that relates compensation costs to the sales value of production; (4) careful selection criteria to introduce the plan - Scanlon consultants require considerable upfront management commitment; and (5) a vote by employees to accept the plan with normally very high criteria to support its adoption.

Those are the structural elements of a Scanlon Plan. The reality is that the Scanlon Plan is more of a philosophy of management than a compensation plan. That philosophy is based on identification with the firm and its customers, participation by employees, and equitable sharing of performance gains. The Scanlon philosophy is one of the most humanistic in American management and as a result, research results based on Scanlon Plans may not, and probably are not, generalizable to other non-Scanlon firms with gainsharing plans.

The following have been used to describe Scanlon Plan firms:

> "boldest attempt at employee participation in the United States. Its leadership model approaches the democratic values held by non-industry institutions" (Katz and Kahn, 1966, p. 381).
>
> "...perhaps the most significant contribution to union-management relations that has been made in the course of the past two decades" (Golden, 1958, p. 2).

The Experience with Gainsharing

Despite a fifty year history, there is only very limited res ch on gainsharing plans. Much of what does exist is very limited.

There have been three streams of empirical research on gainsharing. Although this research is neither conclusive, nor does it contain much in the way of breadth, one statement that can be made with some degree of assurance is the fact that there is no evidence to suggest that organizations with gainsharing plans are worse off than they would otherwise be. In fact a substantial amount of gainsharing research would have to be regarded as favorable.

The first group of studies were based on dissertations and technical reports conducted by master's degree students at the Massachusetts Institute of Technology. These were predominantly case studies and in general reported favorable to very favorable performance, employee relations and labor relations results.

The second set of studies was conducted at Michigan State University. These studies primarily report the results of attitudinal data collection, but provide solid empirical results. Unfortunately, the entire sample of employees were from firms with the Scanlon Plan. Because Scanlon Plan firms employ very rigid selection criteria, it is questionable the degree of generalization that can be made to other firms that are more traditional in nature.

This research reports the following results concerning employee and management attitudes toward the Plan (Goodman, Wakely, and Ruh, 1972). In a sample that included 21 sites of six Midwestern companies and involved 2636 respondents, employees reported that:

(1) The plan was more than a nice idea.

(2) It was worthwhile to offer suggestions.

(3) The Production Committees were the principal vehicle for improving company efficiency.

(4) The plan helped employees to do their jobs better.

(5) The plan increased employee knowledge of the company.

(6) The plan improved trust and confidence between employees and the company.

(7) The plan helped the company's financial situation, although management thought it had a bigger impact than did the employees.

(8) The plan encouraged employees to work harder.

Additional work from the same sample identified the level of employee involvement and management and chief executive commitment to participative policies as predictive of success (White, 1979).

The recent American Productivity Center (O'Dell, 1987) study reports on employee earnings from gainsharing/profit-sharing plans. The different types of gainsharing plans have produced a broad range of bonus earnings over the period 1981-1985. Median bonuses of firms with the Scanlon Plan ranged from 5-9.2 percent, Improshare firms paid between 5-8.5 percent, profit-sharing 6.5-8.5 percent, and custom plans from 5-10 percent. When mean data were examined the results tended to be somewhat higher. This suggests, and the author's experience supports, that some plans pay little or no bonuses, while others pay in excess of ten percent. However, as the median data suggest, the typical employee is likely to receive a bonus between 5-10 percent.

The most recent work has looked at the impact on organizational performance of a collection of gainsharing plans. In this instance four "studies" are noteworthy. The first was a survey by the General Accounting Office (GAO) (1981). The GAO interviewed 36 firms with gainsharing plans, with two-thirds (66 percent) providing some "hard" data. An even smaller number had done formal evaluations. Ehrenberg and Milkovich summarize these results as follows:

> "...the oft-quoted GAO results are that gainsharing improved performance by 17.3 percent at 13 firms with sales less than $100 million, and in firms with sales of 100M or more, the average improvement was 16.4 percent." (Ehrenberg and Milkovich, 1987, p. 111).

A second survey by the New York Stock Exchange (1982) reported that 15 percent of its respondents with 500 or more employees had a gainsharing plan and that 70 percent of the responding firms reported that gainsharing resulted in improved productivity.

The third survey by the American Productivity Center (O'Dell, 1987) of 212 firms asked the impact of four types of gainsharing plans - Scanlon, Improshare, profit-sharing, and custom designed. The survey reports the results of those firms indicating "positive" or "very positive" results. There are some interesting findings.

(1) Gainsharing plans are reported to have a more favorable impact on productivity than profit-sharing.

(2) Scanlon plans are reported to have had a slightly bigger impact than the other forms of gainsharing.

(3) The Scanlon plan had a more favorable impact on costs and quality than did profit sharing or Improshare plans.

(4) Improshare had a bigger impact on employee pay than did the other forms of gainsharing.

These results would appear to be consistent with what is known about these plans. Profit-sharing plans pay out infrequently, and are based upon more global measures of organization performance often times outside the control of employees. Therefore, their impact on productivity would be expected to be less. The Scanlon Plan encourages employee involvement teams. Therefore, it would be expected to have a more favorable impact on quality and costs than would Improshare, which is primarily a time savings based system. Because Improshare more closely resembles traditional individual incentive systems, with a 30 percent leverage goal, it is not surprising that it had a larger impact on employee pay, than did the other plans which would normally encourage conventional wage administration.

Research by the present author (Schuster, 1983, 1984a, 1984b) on forty-five predominantly unionized firms has been somewhat more sanguine and cautious in attributing accolades to gainsharing. Using formal, rigid evaluation criteria and conservative (time series) statistical procedures described elsewhere, the compilation of results from this research suggests that about 50 percent of firms realized statistically significant productivity improvements over what they would have expected to have achieved in the absence of a gainsharing plan. A leveling effect was noted with firms experiencing an immediate level change followed by a modest upward trend in productivity.

Interestingly, employment was shown to stabilize in a majority of the firms, particularly when compared to national industry control

groups. When asked why their employment remained stable when the overall industry had declined, one controller noted that gainsharing had made the company more competitive, allowing it to capture a large share of a smaller market. In addition, the gainsharing had permitted the company to achieve such positive improvements in employee relations that the management was reluctant to lay off employees.

The impact on such variables as labor relations, attendance, turnover, and quality was generally favorable. This finding also finds support in the American Productivity Center study. For example, from 68-86 percent of the firms, depending on the type of plan, reported that the plans had had a favorable impact on labor relations.

One interesting finding of Schuster's work was that the author was able to observe all types of gainsharing plans, Scanlon, Rucker, Improshare, and locally developed. In all categories, there were particular types of plans (for example, Improshare) that succeeded while others failed. This suggests that the type of plan is not the key determinative factor in successful plans. This is consistent with Lawler and Bullock's findings that plans must fit the situation in which they are installed. A combination of the "fit" of the plan to the location, management commitment, and the quality of implementation seem more related to success. Of all the plans, the longest running seemed to be the Scanlon Plans, suggesting that the nature of the management commitment required for a Scanlon Plan gave the philosophy (involvement and participation) more staying power, even when productivity gains were not present to support the plan, and when employee bonus earnings had temporarily deteriorated.

Another observation that must be made is that despite rigorous evaluation procedures, it is nearly impossible to isolate the contribution of gainsharing over other organizational factors as contributing to the effectiveness of the organization. Indeed, factors such as capital investment, changes in management and union leadership, and the general state of the economy can have more of an impact on the performance of the firm than some gainsharing plans. These factors can also have an impact on employee bonus earnings as well.

Differences Between Profit-sharing and Gainsharing

Prior to turning attention to profit-sharing, it is appropriate to note the differences between gainsharing and profit-sharing plans. As noted at the outset, gainsharing and profit-sharing have similar goals, but are often treated differently in the research literature. Below is a more indepth summary of the differences between profit-sharing and gainsharing. Some managers and employees confuse gainsharing and profit-sharing. Table One summarizes the differences. It should be noted that profit-sharing and gainsharing are conceptually the same. Profit-sharing might be regarded as one measure of gainsharing. However, five distinct differences are summarized below.

TABLE ONE

DIFFERENCES BETWEEN GAINSHARING AND PROFIT-SHARING

Dimension	Profit-Sharing	Gainsharing
Time Frame for Measurement	Annual	Monthly/Quarterly
Use of Funds	85%-90% Deferred Compensation	All current compensation
Factors Measured	Total Business Performance	Labor Costs/Hours Sales
	* Some Sensitive Information Required	Material Quality Supplies*
	* Some Factors Beyond Employees Control	* Important Information Not Unduly Sensitive
Company Size	Small Companies	Big Companies with Diversified Operations
	Senior Level Employees of Large Firms	
Financial Structure	Requires Profit and Business Unit	Can be Used in P/L Centers as well as Cost Centers

Gainsharing rewards are based on some measure of productivity, rather than the more global measure of profitability. Many factors that influence profitability (for example, the cost of capital or marketing effectiveness) are beyond the control of facility level actors. Since the goal of most gainsharing plans is to measure and reward employees for those aspects that come within their sphere of influence, gainsharing is often preferred over profit-sharing. Second, in most profit-sharing plans, rewards are measured and paid on an annual basis, whereas with gainsharing the measurement period is most commonly monthly. The frequency of the bonus is likely to increase its value in reinforcing positive employee work attitudes and behavior.

The vast majority of profit-sharing plans provide deferred compensation. Gainsharing plans compensate employees when improvement occurs. The long-time lag between performance and rewards can reduce their motivating potential.

Finally, in most large companies, single facilities and even some divisional ones do not "earn a profit" that could be shared. In financial terms, they may generate operating income, but not profits that should be shared. In these situations, profit-sharing would not be appropriate. Also in large diversified companies the relationship between one business unit and another may be at best limited. Corporate profit sharing is not likely to be meaningful, because employees in these settings are likely to be more attached psychologically to the facility, rather than the company.

As noted above, Improshare plans had a greater impact on employee earnings than profit-sharing and other forms of gainsharing. In a

profit-sharing plan, employee earnings are more effected by external conditions than would be the case with a gainsharing plan.

A last point is that a small number of firms maintain both gainsharing and profit-sharing plans with the purpose of gainsharing to be a short-term productivity gain, and profit-sharing as a longer term division of company earnings.

PROFIT-SHARING

If gainsharing plans have been the subject of only limited empirical research, profit-sharing has been subjected to even less. While over the years, the Profit-Sharing Research Foundation has published monographs and technical reports, traditional scholarly research has been very limited. This is the case despite the fact that profit-sharing may have begun in the United States as early as 1794 (Gilman, 1889).

The history of profit-sharing plans in the United States is summarized by Florkowski (1989). He shows sustained growth in profit sharing plans since the 1860's with the largest profit-sharing plan being at Sears, Roebuck & Co. with over $4-billion in assets.

Definition and Theory

As with the definition of gainsharing, profit sharing plans are organizational systems that distribute a portion of the organization's profits according to a predetermined formula. Payments may be paid either in cash or deferred as discussed earlier and are typically paid on an annual basis. Many profit sharing plans contain conditions and

reservations. Conditions require that a prerequisite level of profitability be achieved before the organization's performance is considered satisfactory to allow for payments to employees. However, once this occurs all profits are included in the calculation. Reservations permanently exclude some amount of profit from the calculation that would be considered a fair return on investment (Florkowski, 1989).

The underlying premise of profit sharing plans is that the work force is capable of influencing company financial performance and will be more likely to do so if the firm agrees to return a portion of its earning back to the employees. Florkowski (1987) has summarized the literature on profit sharing into a theoretical model that focuses on the impact of profit sharing on employee organizational commitment. Variables such as perception of pay equity, performance reward contingencies, influence on decision-making, are said to influence support for profit-sharing, which in turn influences organizational commitment. Committed employees have more positive work attitudes and behavior, labor relations are better, and productivity and quality is enhanced.

In a recent test of the first part of his model, Florkowski and Schuster (1989) found support for pay equity and performance reward contingencies influencing profit sharing support. Profit sharing support then was found to influence organizational commitment. No support was found for the linkage between decision-making and support for profit sharing. Scientific studies linking profit sharing, commitment, and organizational performance have yet to be conducted. As

shown below, the evidence that exists is at best marginal and much of it lacks the requisite level of academic rigor.

The Use and Experience with Profit-Sharing

Florkowski (1989) using Internal Revenue Data found that 125,000 new deferred plans were instituted in the period 1980-85. He further notes that there is no "systematically" gathered source on the extensiveness of cash plans. Metzger (1978), however, estimated the number of cash distribution plans operating at the end of 1977 at 120,000. Doyle (1983) has estimated that there are 350,000 profit sharing plans. More recently, the American Productivity Center survey found that 32 percent of its responding firms had a cash or deferred profit sharing plan with 37 percent of the goods producing and 28 percent of the service providing firms using profit sharing plans. The actual number of workers participating in these plans cannot be extrapolated from this data.

The best review of the profit-sharing literature is by Florkowski (1989). He identifies seven studies that investigated the impact on corporate financial performance, twelve that considered the behavioral and attitudinal impact of profit-sharing, eight that dealt with union relations impacts, and three with macro economic considerations. As with other commentators, Florkowski notes the dismaying quality of the research in this area.

The financial effects of profit sharing have been assessed with measures related to sales, income, investment, and stock. Firms with profit-sharing generally have displayed higher levels of growth on such

indices than those without profit-sharing. Howard and Dietz (1969) found that profit-sharers outperformed non-sharers in eight of nine industries in a sample of 175 companies for the period 1948-1966. Howard (1979) continued this work for the period 1958-1977 in a study of 202 companies in six industries. In two thirds of the cases investigated, firms with profit-sharing exceeded the performance of non-sharers. The results were consistent across three of the six industries represented in his sample. Metzger (1978) reported that a sample of profit-sharing industrial companies and retailers consistently surpassed the control group of fortune 500 companies in median returns on sales and equity. Two studies of the retail industry obtained similar findings (Jehring & Metzger, 1960; Metzger & Colletti, 1971). When combined, these two analyses show that the level and trend of performance over a 12-year period were better for profit-sharing department stores than for their non-sharing counterparts.

These results seem to hold internationally. Profit-sharers in the West German metal working industry have exhibited higher gross returns on capital than non-sharers (Fitzroy & Kraft, 1986). Estrin and Wilson (1986) reported comparable results for British Engineering and metal working companies. Firms with profit-sharing plans generally earned higher profits per unit of capital than did those that lacked plans.

As with Scanlon Plan firms, executives at firms with profit-sharing have tended to view the concept favorably as well (see for example Metzger (1975) and the New York Stock Exchange (1982)). Seventy-three percent of the executives in the NYSE survey reported that profit-sharing had had a favorable impact on the performance of their firm.

Seventy-four percent of the managerial and professional respondents in another study felt that profit-sharing had impacted positively or very positively on overall performance (O'Dell, 1987). Once again, there is an international flavor to these results with a Canadian sample of executives (72 percent) reporting that greater teamwork and cooperation coincided with profit-sharing (Nightingale, 1980).

Employees seem equally disposed to profit-sharing. One study reported that two-thirds of production workers in one survey indicated that profit-sharing provided a daily incentive, offered a sharing of gains that occurred and permitted employees to share in the growth of the firm (Colletti, 1969). These sentiments were echoed by the profit-sharing participants who were surveyed by Best (1961). As before, there is international support for these findings with Wallace and Hanson (1984) reporting a favorable response to profit-sharing by British employees (cited in Blanchflower & Oswald, 1986).

There is some evidence that profit-sharing can improve labor-management relations. Helburn (1966) found that 72 percent of his management and 56 percent of his union respondents identified profit-sharing firms as having a cooperative union-management relationship. Seventy-two percent of the executives surveyed by Brower (1957) stated that union leaders were enthusiastic or favorable toward profit-sharing. Nearly one-half of the executives in an earlier survey felt that their unions had given full approval or cooperation to existing plans (Flippo, 1954). Zalusky (1987) reports that even prior to 1970 the UAW, USW, and IAM had negotiated 21, 22, and 28, respectively, profit-sharing plans.

PAY-FOR-KNOWLEDGE

Definition and Theory

Pay-for-knowledge represents a departure from traditional pay systems. In traditional pay systems, pay levels are tied to the specific job that an employee is assigned to. In contrast, in a pay-for-knowledge system, employees are compensated for the "number, kind, and depth of skills that they develop" (Lawler & Ledford, 1984, p. 6). Employees are permitted to enhance their earnings levels by acquiring new levels of skill or knowledge, without changing job assignments.

Conventional pay systems are based on theories underlying traditional job design and job evaluation procedures. Jobs are designed with limited scope of employee skill, effort, and responsibility, thereby permitting employers to utilize the least expensive labor for each task. In contrast, the theory surrounding pay-for-knowledge compensation plans is linked to new methods of job design (such as socio-technical systems) that focus on greater employee growth, development, and contribution (oftentimes referred to as high involvement/commitment work designs). Employees are encouraged, and the work design and pay system reward increased development of employee knowledge, skill, and assumption of responsibility.

Conventional pay systems appear to be more appropriate and consistent with control oriented management philosophies and organizational structure, whereas pay-for-knowledge compensation plans are more likely to be found in flatter, decentralized, less control oriented situations (Walton, 1965).

Pay-for-knowledge is frequently used in conjunction with other progressive employee programs such as employee involvement as part of an overall approach to human resource activity. Pay-for-knowledge seems to have developed a following in "greenfield" sites in combination with other high involvement systems.

It has been reported that there are two basic approaches to pay-for-knowledge -- multi-skill based and increased knowledge based. Multi-skill based plans which are particularly appropriate for factory settings link pay levels to the number of specific skills an employee learns. In contrast, increased knowledge based plans attach pay levels to increased knowledge and skill within a job category and is considered more appropriate for skill jobs such as skilled trades. Many pay-for-knowledge systems combine elements of both approaches.

The recent Department of Labor study by Gupta, Jenkins, and Curington (1987) effectively summarizes the characteristics of a pay-for-knowledge system. Table Two on the next page summarizes the characteristics of pay for knowledge plans as identified in their study.

Use of Pay-For-Knowledge

Pay-for-knowledge is a term often used to describe related methods of compensation design such as "skill-based compensation, knowledge based pay, multi-skill compensation" (Jenkins & Gupta, 1985). According to the recent study by the United States Department of Labor, there is no way of knowing how many pay-for-knowledge facilities exist. One estimate places the number at over 200, with no estimate of the number of employees covered by such plans.

TABLE TWO

SKILL UNIT CHARACTERISTICS IN PAY-FOR-KNOWLEDGE PLANS

Question	Mean	Median	Number of Plants Responding
How many skill units does your PFK plan include?	19.8	9.5	18
What is the *maximum* number of skill units an employee is allowed to learn in the PFK plan?	14.9	7	15
What is the *minimum* number of skill units an employee *must* learn in the PFK plan?	2.7	1	17
How many skill units do employees *typically* learn under the PFK plan?	5.3	4	15
How many skill units can employees typically *stay competent in*?	4.8	3.5	12
What is the average number of weeks required to learn a skill unit?	32.1	26	16
What is the minimum number of weeks?	23.6	26	15
What is the maximum number of weeks?	42.2	52	13
How long does it take an average employee to learn the maximum number of skill units allowed (in weeks)?	81.2	90	16
After employees have completed one skill unit, how many weeks must they perform that skill unit before being eligible to begin learning a new skill unit?	32.8	26	6
Not including learning time, how many weeks may employees perform one skill unit before they *must* move on to another skill unit?	55.5	60	8

In the recent survey of non-traditional reward systems by the American Productivity Center, 85 of the 1598 participating firms (5 percent) reported the use of pay-for-knowledge with more than three times as many plans in goods producing rather than service industries, thus indicating a factory bent to pay-for-knowledge.

Sixty-eight percent of the pay-for-knowledge plans were reported to have been introduced within the last five years. Several studies have noted that pay-for-knowledge is commonly used as a component in the design of human resource systems in high involvement work settings (Lawler & Ledford, 1984).

Pay-for-knowledge plans are said to offer a number of benefits (U.S.D.L., 1988). These include greater employee flexibility, less need for staff and supervision, less restrictive work rules, etc. All of these are suggested to be related to enhanced productivity.

Because of the broader array of skills possessed by the workforce, it is suggested that pay-for-knowledge companies are able to staff the organization with fewer employees. The enhanced training of employees permits the organization to operate with fewer employees to cover inefficiencies such as absenteeism, turnover, and to more readily adapt to overtime needs. Because pay-for-knowledge companies often operate with high commitment work teams, managerial functions are frequently included in the pay structure, thus reducing the need for supervisors and other staff employees. Pay-for-knowledge systems have fewer and broader job classifications. This permits greater production efficiencies by allowing greater ease of movement by employees. In addition, pay-for-knowledge systems require broader and more flexible

work rules, thus permitting new approaches to work design and further rewards for teamwork and cooperation.

Additionally, respondents were asked to assess their perception of performance improvements resulting from their pay-for-knowledge plan. The following results were reported: (1) higher output (72.2 percent); (2) lower cost per unit (72.3 percent); (3) lower labor costs per unit (66.7 percent); (4) defects were lower (77.8 percent); (5) less turnover (68.5 percent); (6) absenteeism was lower (73.7 percent); and (7) expenditures for nonmanagerial training were higher (76.5 percent). Most of the firms responded that the administrative costs for pay-for-knowledge were either the same or only slightly higher. There were few, if any, negative respondents.

It should be noted that most of the published accounts reporting these benefits would not pass the test of academic research. Much of the positive outcomes from pay-for-knowledge plans could be derived from the fact that most pay-for-knowledge companies are new plants or facilities, and have many progressive management and human resource policies. As a result, these favorable findings need to be reviewed with some degree of healthy skepticism. Despite this, employees seem to be satisfied with the additional earnings opportunities afforded by pay-for-knowledge systems, while employers seem very content with the "potential" productivity benefits, as well as the healthy workplace climate that is created. Pay-for-knowledge should be viewed as one element of an entire new approach to human resource management.

LUMP SUMS, TWO TIER, SALARY STATUS, AND EARNED TIME OFF

In a seemingly never ending battle to contain and reduce wage costs, employers resorted to several devices during the 1980's. Two principal concepts were lump sum in lieu of fixed increases in compensation and the two tier wage/salary structure. Both of these devices became widespread over the last ten years, although recently their use appears to be diminishing as labor markets have begun to tighten.

Lump Sum Definition and Theory

Lump sum payments/bonuses are one-time payments to employees that are given instead of all or part of a base pay adjustment. Lump sum payments do not become part of base pay. Lump sums come in two varieties -- flat across the board increases, and percentage bonuses.

There is no particular theory to support the payment of lump sums other than the fact that they contain the escalation in compensation over a period of several years. In a lump sum situation, a bonus is paid, but the employee's wage/salary remains the same. Other wage and salary based components of compensation also do not escalate. Examples would include pensions, holidays, and vacation, shift differentials, and overtime. It is easy to see that this avoids the year over year escalation and inflation that normally occurs in employment costs. Unions and employees most often oppose lump sums fearing that real wages will decline.

Use of Lump Sums

Recent Bureau of Labor Statistics (BNA, 1988) data show that 2.7 million of the 8.7 million workers covered by major collective bargaining agreements (1000 workers or more) received lump sums. This number reached 40 percent (2.5 of 6.3 million) private sector workers.

In the low inflation years of the 1980's, lump sums have increased from 6 percent and 19 percent in 1984 and 1985 respectively, to one-third in 1986 and 1987 (BNA, 1988). For the first quarter of 1988, the number of contracts with lump sums had escalated to 42 percent. This statistic is supported by the American Productivity Center survey which shows that 30 percent of its responding firms gave lump sum bonuses. Interestingly, the distribution of lump sum bonus firms was nearly equal between goods producing and service industries (31 percent/29 percent).

According to BNA data for 1987 (BNA, 1988), the average contractual lump sum bonus when a flat dollar payment was used was $782 in the first year and $593, and $607 in the second and third years. Using the percentage approach, increases were 3.6 percent, 3.0 percent, and 3.4 percent over three years.

Two-tier Wage Plans Definition and Theory

In two tier wage systems, newly hired employees are paid at a lower rate than the previously hired workforce. Thus, new employees are paid less than employees with longer service.

There are two types of two-tier pay plans: "permanent" and "temporary." Employers with temporary two-tier plans hire employees at a separate and lower wage and/or benefit scale than incumbent employees.

Eventually, their wage and/or benefit schedule merges with existing employees over time. In a permanent two-tier system, newly hired employees may never reach the same wage/benefit status of incumbents.

Jacoby and Mitchell (1986) note that two-tier plans in union contracts can never be truly permanent since the collective agreement is normally negotiated every two to three years. BNA data show that three quarters of all two-tier plans are likely to be temporary with a pay disparity period lasting from 18 - 60 months.

There is no particular theory to support two tier plans, other than to recognize that when a second tier wage/benefit scale is added, it has the effect of reducing the firm's average employment costs and total compensation costs, by reducing of the employees' total career earnings. Needless to say, proponents of two tier would argue that the second tier wage permits jobs to be created that might otherwise not have been by creating a greater economic advantage to the employer.

Use of Two-tier Wage Plans

Although this set up a heretofore unseen inequity in American employment, 11 percent of the APC survey group had two tier structures. More than twice as many firms were in the goods producing compared to the service sector.

Major industries with two plans include airlines (50 percent), aerospace (33 percent), forest paper products (32 percent), transportation (30 percent), building materials (27 percent), and auto/farm equipment (25 percent) (O'Dell, 1987).

APC data show that an average 14 percent of employees are paid on the second tier and that their average pay is 67 percent of first tier employees with like jobs. Two-tier situations have created considerable pressure to correct the "inequity" and many, including one of the earliest and most visible at American Airlines, is being dropped.

Once again, it must be noted that both lump sum and two tier strategies are more effective in loose labor markets. As labor markets tighten, the ability of employers to provide token wage adjustments or pay less is reduced.

Two other innovative pay devices are worth noting, although almost no research has been conducted on these initiatives. All salaried status for hourly employees (subject to Fair Labor Standards Act requirements) has grown to where 11 percent of the APC surveyed, report having them. In an all salaried situation, hourly employees are generally permitted personal and sick time at employer expense in the same manner as traditional salary employees. This helps to bridge the treatment gap between hourly employees and salaried. It is an issue of dignity and respect for many employees and helps to unify the organization. As with many other programs studied such as pay-for-knowledge, all salaried status is most often used in conjunction with other progressive human resource management programs, practices, and procedures.

Earned time-off (6 percent of firms studied) provides time-off in lieu of a monetary bonus. Very little is known about this type of reward. Intuitively, however, it is likely to have appeal to those individuals that have significant responsibilities other than at work.

PUBLIC POLICY ISSUES

There are several public policy issues which are suggested by this review. One of the first is, in what sectors of the economy are innovative compensation systems well suited and likely to be successful. One area demanding consideration, is the degree to which monetary rewards, particularly gainsharing, may be applicable to the not-for-profit (for example, hospitals) and public (government agencies) sectors.

The public sector has many jobs which mirror traditional manufacturing and others that resemble service jobs (for example, hospitals), where gainsharing is being attempted. The public sector has not experienced a great deal of innovation in pay practices and may be fertile ground for experimentation in this area. Certainly, a federal evaluation of experience of federal agencies using gainsharing would be helpful not only to the federal government, but also to state and local employers. There is little evidence of the use of gainsharing in the not-for-profit sector as well. Clearly, the entire issue of gainsharing and profit-sharing is one calling for additional research.

There is a significant absence of research in this area. In a review of compensation practices published in 1987, Ehrenberg and Milkovich (1987), highly respected authors, find little to say about the subject. Hamner's (1988) review concludes much the same as does Florkowski and Schuster's review of profit-sharing. Hence, more federal support for research would be very desirable.

It may be questioned whether pay-for-knowledge systems can be applied within civil service systems that tend to operate in a very

rigid fashion in order to maintain internal "equity." Similarly, we know little about the effectiveness of pay-for-knowledge, particularly when the rhetoric and hype are withdrawn. One issue that requires further thought and investigation is whether pay-for-knowledge is applicable to blue collar factory settings where it is primarily being used, or whether there is an application for it into white collar and professional jobs. In many organizations, compensation systems for more long service white collar and professional employees, have lost their motivating power as these employees pass the mid-point in the pay range and have seen their career advancement possibilities diminish. This, combined with a flattening of organizations, thus producing even fewer promotion opportunities, has created an early sunset on many careers. Employees experience little, if any, further advancement in compensation. At the same time, the scaling back of organizational headcount has left the remaining "survivors" with more work and responsibility. Whether pay-for-knowledge could provide a low cost solution to this dilemma is anyone's guess, but it may be worth further consideration.

Another policy question worth noting is whether employees earn more under pay-for-knowledge plans than would otherwise be the case under conventional pay systems. Additionally, the question of pay-for-knowledge and comparable worth, needs further consideration. A federal role (with private foundation support) in continuing research in this area would be very useful.

A critical issue is whether gainsharing and profit-sharing bonuses should be given tax advantaged treatment. One proposal (S. 932) would

provide favorable tax treatment for gainsharing and cash distribution profit-sharing monies by making them nontaxable income (Congressional Record, 1987).

This author suggests that such a policy is unnecessary and would undermine the effectiveness of these plans in practice rather than enhance them. First, we do not know enough about the success/failure of gainsharing and profit-sharing to warrant a federal intervention at this time. What we do know, however, suggests a fifty year history of success with the use of these concepts in the absence of creating tax leveraging. Second, the research on this subject strongly suggests that management commitment is critical to the success of a gainsharing plan. One might reasonably ask how much management commitment would there be if the primary motivation for a plan was tax-oriented, rather than being driven by a desire for a change in the style of management and culture of the organization.

In addition, since employee involvement seems to be strongly related to plan success, it might be questioned how much employee involvement there would be if the plans were introduced solely on the basis of providing tax advantaged income to employees. The British experience of the 1970's should be insightful. There the government attempted to encourage productivity based pay increases as part of its pay control policy. Many companies installed plans "related to productivity" which paid out regardless of whether there was a favorable impact. In post-pay control interviews conducted by this author, British managers openly stated that their sole motivation was to provide pay adjustments in excess of stated guidelines and their attention to

formulas was limited to insuring that they paid out regardless of the performance of the company.

In recent years, the British government has attempted to increase the use of profit-sharing schemes through tax leveraging. A recent survey of 30,000 British companies showed that 243 (less than 1 percent) profit-sharing plans had been registered with the government, with 146 being approved (BNA, 1988b). It was also reported that major employers including Boots and British Airways had done away with their plans.

Another regulatory issue of some concern to employers is the impact of gainsharing bonus monies on the calculation of overtime earnings. Historically, nondiscretionary bonuses have been included in the employee's regular rate for the calculation of overtime. This was very important when most of these bonuses were from piecework incentive systems in which many employees were leveraged as much as 30-100 percent of their base pay. Gainsharing bonuses tend to be in the 5-10 percent range.

The problem lies in that many companies would like to distribute gainsharing bonuses monies equally to all employees, that is provide "equal shares." This provides lower level employees with more of the gains, but more importantly reinforces the cultural issues of teamwork, cooperation, no barriers between office and factory, etc. In essence, a "we're all in this together approach." When companies pay their bonuses in this manner, it creates an administrative problem in that they fall outside of compliance with the Fair Labor Standards Act (FLSA). Administratively, they must then go back and recalculate the employees regular rate and provide each employee with a small check to balance

their compliance with the FLSA. Many employers decide to avoid this problem by paying their bonuses in equal percents, thus avoiding the problem, but also not being able to use the bonus to make a statement concerning the direction of the organization. It is arguable that the FLSA was not designed to apply to such situations and a re-examination of this issue by the Department of Labor would be desirable.

Certainly, a potential role for policy-makers would be in the dissemination of information concerning gainsharing, profit-sharing, and pay-for-knowledge. Sponsoring conferences, circulation of case studies, providing information on resources available to parties interested in gainsharing, would be a useful service. Many companies and unions seek to identify other companies with plans that they may visit to gather first hand experience. A federal listing would not only assist these parties, but would also aid in research by identifying locations for study. Such a list should include both successful as well as unsuccessful experiences.

There is also a training opportunity. Many federal and state mediators encounter collective bargaining situations which would be very well served by consideration of an innovative form of compensation. If these individuals were better trained to discuss these issues with the appropriate labor and management leaders, collective bargaining would be well served.

It would be desirable to enhance the monies that are available to support area-wide labor-management committees such as the Buffalo-Erie County Labor-Management Council. These organizations provide considerable information and expertise to firms and unions in their

communities. They provide an excellent delivery system for this information and assistance.

There is a need to recognize that pay freezes and pay reductions along with continuous use of lump sum payments to employees, and two-tier wage systems, combined with associated reductions in fringe benefits, threaten to reduce employees standard's of living to an unacceptable level. Recent BNA data for 1987 show that in contracts with lump sum payment, "median wage adjustments amounted to a freeze in the first year," followed by 1.8 percent and 2.0 percent, in the second and third year, respectively. In the first part of the 20th century, an issue of the "living wage" was one that attracted the interest of policy makers. There have been many concession situations in recent years, combined with pay freezes (with or without lump sum increases) that have undermined employee economic security.

There is no shortage of evidence that competitive conditions may require companies and unions to approach wage decisions in a very cost conscious manner and historical methods of pay delivery, such as through Cost-of-Living adjustments, may have caused the structural compensation problem in a firm or industry that must now be addressed. However, it must be recognized that there is nothing particularly innovative about reducing employees wages, and in turn their standard of living. The Labor Department should closely monitor this trend as its long term implications would not be very desirable.

NOTES

1. The American Productivity Center survey involved questionnaires mailed to 11,000 compensation professions in 4500 locations and organizations through membership lists provided by the American Productivity Center, the American Compensation Association, and through companies known to have gainsharing plans.

There were 1598 respondents including 741 in goods producing, 741 in service providing, and 116 in government installations. The survey allowed multiple locations within the same, but only 1 response per location was permitted. The 1598 organizations employed over nine million people.

The survey is generally unrepresentative in several ways. Generally, it was composed of larger, who were thought to be more innovative, organizations because of their connection with the APC and related factors. The goods producing sector composed 41.1 percent of the responding firms for more than its share of the overall economy. Response procedures also understate the results since a compensation manager responding for multi-plant locations would be treated as one response.

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